SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

Vol. XVIII

لفنافضا الاختياطا والمرووف فأطماءا والمصاومة الإساطاس والاسالوط وألفا المصورين ويجازانه وبالاق ورواع فيطاع لجارا

MARCH, 1946

No. 3



Fig. 26. A new, unreleased Orchid Cactus, Nimbus, originated in the Coolidge Rare Plant Gardens. Photo by Haselton in the "Epiphyllum Handbook."

CACTUS AND SUCCULENT JOURNAL

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Announcing the First Epiphyllum Book

Epiphyllum Handbook

With 170 Photographs and 11 Color Plates

By SCOTT E. HASELTON

Of the myriads of plants being grown for their flowers, the Epiphyllums are among the most deserving of first place because of their exotic beauty. The purpose of this book is to help those who have a newly acquired interest in Epiphyllums to know their fascinating history, their culture and propagation, their differences and similarities, their names, and their possibilities. In other words, to help one to know and enjoy his plants to the fullest extent. We have made translations of most of the foreign publications so that the wealth of their experiences are available to us. For the scientific minded there are descriptions of the genera in the Epiphyllanae and the keys of Schumann, Berger, and Britton and Rose. For the beginner, the pictures alone will tell the complete story of these fascinating plants. The contents give some idea of the material packed into this 250 page book:

THE PLANT: Its Parts and Their Functions; Root System; Habit; Branches; Flower; Ovary, Tube, Outer Petals, Inner Petals, Pistil, Stamens; Fruit.

COLOR—as Applied to Orchid Cacti.

CULTURE: Soil and Fertilizers; Potting and Marking; Watering and Spraying; Air and Sun; Tying-up and Training; Cultural Experiments; How to Flower Epiphyllums, Culture in England, Epiphyllums in the Living-room.

DIFFICULTIES IN CULTURE: Pests and Diseases
1. Mistakes in Growing Conditions; 2. Insects; 3. Fungus and Bacteria.

PROPAGATION: From Cuttings; From Seed; By Grafting.

THE EPIPHYLLANAE: Zygocactus; Epiphyllanthus; Schlumbergera; Disocactus; Chiapasia; Eccremocactus; Nopalxochia; Wittia; Lobeira; Epiphyllum, True Species.

CLASSIFICATION: Schumann; Britton and Rose; Berger.

HYBRIDIZERS.

HYBRIDIZING: Law of Heredity; Application of Hybridizing and Heredity; Species of Cacti Used in Hybrids.

ORCHID CACTI: Symposium of the Best Kinds; Flowering Data.

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Advance orders will be filled first, so if you have placed an order, please send \$3.50 and your copy will be mailed by March 25. (Add 10c postage in the USA, foreign 50c, Sales tax on California sales 9c.) We are reserving copies for members of the Cactus and Succulent Society and the Epiphyllum Society, after which they will be placed on general sale in time for the flowering season. Mail you check today.

ABBEY GARDEN PRESS
Box 101—Pasadena—California

A Cactus Collector Goes to Peru

By JOHN F. AKERS

Without doubt, the greatest sorrow that can overtake a native Californian is to leave his state. He may lose his money or become afflicted like Job and he will brush it off with a smile; but let him leave his native state and a major calamity has occurred.

So, after many sad partings and the farming out of our many cacti and succulents among friends, we left for Akron, Ohio, to aid the war effort. We soon decided there was little to interest us in Ohio, so I applied for Foreign Service. I had in mind the very faint hope of going to South Africa and collecting Haworthias, but as foreign appointments come but rarely I had little

hope of leaving the state.

Nevertheless, six months later we boarded the Sunshine Limited for Mexico City. Not until we crossed the border and awoke to see the plains of giant cacti and wild flowers surrounded by the picturesque Sierra Madre Mountains of Monterrey did we realize how truly homesick we were for deserts, mountains, and cacti. Mexico had had exceptionally heavy rains, and the high plateaus were like vivid oil paintings; splashes of yellow marigolds, red zinnias, and magenta cosmos made a colorful carpet which was framed by the cacti and the craggy mountains. In some of the deep arroyos we could see forests of giant cerei, but of course the engineer wouldn't stop. In Monterrey a bridal party boarded the train amid showers of rice. The tiny flower girl in white satin and the bridesmaids in flowing tule dresses of vivid colors, which were only surpassed by the vivacious coloring of the Mexican girls themselves, made us realize that we were in Mexico and all this was not a dream. Here we saw our first fine specimen of antigonum covered with showers of rosy-pink flowers. From Monterrey, Mexico, to Lima, Peru, we never again were without this colorful vine, which goes under the names of Rose of Montaña, Queen's Wreath, Coral Vine, and Belisima. We also had the pleasure of buying the first bananas that we had had in a long time. After leaving Saltillo the cactus growth was much more sparse and we saw little of interest until we reached Queretaro, the home of the Mexican fire opals. Queretaro sits at the mouth of a very picturesque canyon erroded in reddish-brown strata and many interesting plants grow there. Not far over the summit of the canyon we saw hillsides with red-spined Ferocacti that looked very interesting.

We had the pleasure of staying for a month in Mexico City while waiting for aeroplane reservations. Our most interesting side trip was the one we took to Uruapan to see the new volcano, Paricutin. The train winds its way like a sidewinder over the hills, taking the long way around to avoid climbing over the Mil Cumbres, or thousand peaks summit. Our train passed along the edge of two gorges that were very interesting. In the first grew a forest of columnar Pachycereus, while the other was ablaze with wild flowers and snowy white Echeverias clinging to the rocky walls. We passed through Morelia which is famous for Morelianas, a confection made by cooking condensed milk and sugar together until it turns to candy. These are served as thin wafers. The next stop was at Patzcuaro, the famous fishing lake that has been stocked with trout. Venders sell two fried trout in a bun to the tourists who have enough courage to eat them. From Patzcuaro to Uruapan the train descends through mountainous country covered with pine trees and wild flowers. Uruapan has a delightful sub-tropical climate and is surrounded by pine-forested hills. Here is practiced the real Mexican laquer work. The wooden article to be decorated is painted with a glossy black lacquer and dried. Then a design is traced upon the article and every part that is of a similar color has the lacquer scraped away with a scalpel-like knife. The pigment powder is wet with oil, and a pinch is rubbed between the fingers until smooth and then applied to the carved-out areas with the ball of the thumb or the heel of the hand. The tray is then set out to sun dry, and after drying the process is repeated using another color. The more colors an article has, the more expensive it is as each color represents a complete and separate operation. The botanical garden of Uruapan was also inter-Native avocados, giant ornamental bananas beside which a person appears dwarfed, coffee, orchids, ferns, and many new plants were flourishing. Through the garden ran a colorful stream of the bluest water I have ever seen, and over a hundred springs gushed out of the banks amid a carpet of ferns and flowers.

We hired a taxi for the thirty-mile ride to Paricutin. As we drove the last ten miles, the light cover of dirty gray ash increased continually. The green trees changed to dead trees, and the stark desolation of the last five miles was over-powering. We began to realize at last just how bad a volcano could be. A short way further we came to the edge of the lava flow which extends about three miles from the base of the volcano. Such a twisted, centered jumble of lava as this, was hard to imagine. In most places the lava was over twenty feet thick, and far away we could see the church steeple arising out of a sea of once molten rock. The little Indian village of San Juan which stood in the way of the lava flow was thought to be completely destroyed with the exception of the church. This presents an intriguing mystery; did the lava split and flow around the town or was the church saved by Divine Providence? Clambering a mile across this glassy lava is out of the question, and the mystery still remains to be solved.

After gracefully climbing aboard two intelligent-looking mules, we set out for a three mile trip around the lava beds. To our right stood the towering lava tipped by the distant cinder cone of Paricutin which was smoking away like some genie of old. To our left lay the desolate field of ash out of which protruded some pathetic stalks of corn, grim reminder that this was once a fertile valley. Dark clouds floated in over head gradually darkening the sky. To the ominous rumble of the volcano was added the distant rattle of thunder. Still we plodded on with our Indian guide trotting along on foot. At last we came to a break in the lava and turning sharply to the left rode towards the volcano. The sky grew darker and the flashes of fire from the volcano lit up the clouds like a torch. Thousands of fireflies twinkled in the distant lava but miraculously changed to small flames of fire as we drew nearer. Soon we were at the edge of the flow and could feel the terrific heat as we watched the steady onward flow of the lava. The creak and snap of the cooling surface would warn us that a chunk was about to break off the flow much as the ice breaks from the end of a glacier when it reaches the sea. As a chunk would topple off the cliff-like face of the flow, a blast of heat would strike our faces and rivulets of molten rock would pour out for a few moments. Soon it began to rain, and how that lava sizzled and snapped! Through the gathering dusk we could just see the roof of the only remaining building of the village of Paricutin. Almost covered by ashes, this roof, a dead tree, and a wooden cross on a hill were sole remnants of the once prosperous village. Boarding an aeroplane for the first time was a real experience that we both enjoyed immensely. The hop from Mexico to Balboa was made in two stages, the first ending in Guatemala City. We stopped at each Central American capital and were amazed at the difference in climate that was caused by a

change of elevation. Most of the capitals are at relatively high elevations and enjoy a delightful climate, but Managua, Nicaragua, is about at sea level and very hot and humid. The size of the lake by the same name is unbelievable. We flew along one edge more than an hour. The shore consisted of a network of tree-covered islets forming a very interesting pattern from the sky.

At Balboa we were stranded for three days and soon realized how easy it is to perspire in the tropics. We took a bus trip across the isthmus to Cristóbal Colón so that we might stand on the Atlantic shore. Tearing along a boulevard through the dense jungle was astonishing. How different this was from Emperor Jones' struggle through similar rope-like vines. Cleared spaces were filled with papaya and banana orchards. The most interesting things were the Quipo trees, whose huge, barrel-like trunks were topped with a sparce handful of foliage. A most interesting trip was taken to the Govern ment Agricultural Experiment station at Gamboa. Here we saw the strange Ilang Ilang tree whose green flowers smelt like spice, huge teak trees, the cannonball tree with its spicy scarlet flowers and its large solid fruit, the paper-bark tree, wild coffee, mangos, mangosteen, rain trees, calabash, vanilla beans, thorny acacia in whose hollow thorns live the most ferocious ants imaginable, the candle tree with long yellow, waxy tapers, rubber trees, Cryptostegia, or Spanish carnation, whose milky sap has been used to produce rubber, and the heavenly-sweet Frangipangi. Throughout Panama grows the African tulip tree with its large scarlet flowers, breadfruit, and breadnut trees, coconut palms, pyrostegia venusta, or flame vines, the worthless panama tree, banyan trees, and various varieties of Indian figs, or ficus trees-one of which has large glossy green leaves and is universally called a rubber tree.

Flying south is an interesting experience. After passing over mountains and green jungles you suddenly reach the spot where the cold Humbolt or Antarctic ocean current strikes the coast. Almost at once green jungle changes to barren desert and the ocean takes on an unbelievable deep blue color. White guano islands dot the coast and far inland bleak chunks of ice that are the high Andes loom austerely in the rays of the setting sun. Rock and sand, sand and rock, out here and there by the tiny black thread that is the Pan-American highway, and by an occasional green valley that is watered by a river tumbling down the western slopes of the Andes, sailed by below. Suddenly we glided to earth and we were in Lima, our new home.

To be Continued

From Ohio

By H. C. SHETRONE

A great part of the pleasure in collecting desert plants or anything else lies in sharing experiences with other collectors. Where two or more fanciers live in the same general locality, they naturally "get together" personally; otherwise, we have the JOURNAL as an outlet for our pent-up exchange of ideas. Of course, there is the scientific aspect of the matter, and this is very important; then there is the purely amateur interest—and this letter is intended to be just that—a sharing of the little things, among ourselves; little things which the scientist might not find worth while.

And so, the other evening, in looking over my plants, noting little interesting details, and finding a world of wonders under the reading glass, the thought came "wouldn't it be fun if all of us 'Xerophyles' could get together for a full session?" Well, what's the next best thing? A letter, we decided, and how about a picture or two? There were a couple of films in the old camera which, according to the date on the container were past the useful age; but maybe they'd do. Let's try 'em.

Gathering up a few plants from more than 500 species, we grouped them on the Museum

steps-and here they are:

РНОТО А

- No. 1—My "poodle" cactus (Ceph. senilis); 4 in. tall, hair 5 in. long.
- No. 2—Mammillaria bocasana, and No. 4, Mam. plumosa; examples of fine many-headed specimen plants grown from tiny seedlings in 7 years.
- No. 3—A Haworthia of the setata persuasion, 8 inches in diameter; purchased 5 years ago as H. gigas, but it isn't; faces of leaves toward tips are toothed; plant a wide-open rosette, even in sunlight. Never has bloomed, but has made three large offsets from axils of older leaves.
- No. 5—A handsome Bryophyllum, brownish markings, identity unknown.
- No. 6—A striking plant, 30 branches, beautifully marbled. Purchased as Euph. hermentiana, but doesn't check. Sorry the top escaped the camera.
- No. 7—A clump of dwarf Crassula, just "stuck in" to "fill out."

РНОТО В

- Nos. 1, 9, 13—Fine old clumps of *Lithops* (terricolor, optica, olivacea) three of 24 species in the collection. The Lithops are a bit difficult the first year, but thereafter they thrive and bloom profusely.
- Nos. 2, 3, 7, 8—Four Lithops ready to bloom; a phenomenon due to the fact that the month of

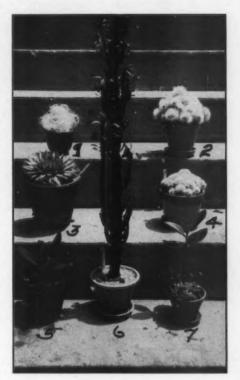


Fig. 27. Photo A

March in Ohio was summer-like, while April and May were cold. These plants normally bloom in late autumn and early winter. We have the same phenomenon, for the same reason, here in Ohio, with autumn-blooming mums. Many which bloom in autumn now are blossoming.

- No. 4—A fine old clump of *Ophthalmophyllum Jacobsenianum*, one of my favorite Mesembs. Looks fine the year 'round, and blooms profusely in early winter.
- Nos. 5, 10, 16—Three unidentified Haworthias of merit and apparently true species. No. 5 came to us as H. albicans virescens, but isn't; it is not suggestive of any Haworthia described in the literature with which I am familiar. No. 10 is an import from Triebner, just priod to the war. It was labelled H. Triebneri (not Triebneriana; angle of leaves more pronounced, that is more acute, than any other I have seen. No blooms nor offsets; plant at least six years old. No. 16 is a distinctive plant, very caespitose, stemless, retuse, with distinct tiny white lines on faces of leaves, somewhat like those on H. paradoxa. Know any of them?



Fig. 28. Photo B

- No. 6—Haworthia Chalwinii. See anything unusual about this? It's a single plant, with leaves on the one stem spiralling to the right and those on the other to the left.
- No. 11—The common but not too well known Echeveria carnicolor. A beautiful plant, a fine winter bloomer—but a veritable incubator for mealy bugs!
- No. 12—The rare and intriguing Crassula deceptrix; one of the gems.
- No. 14—The little known but desirable Crassula remota, with thick, scaly leaves, red-margined.
- No. 15—What happens when the highly succulent dwarf Mesembs, get too much water. They are so greedy that they simply drink till they burst!

Notes On Haworthias

By J. R. BROWN

Haworthia Helmae Poelln. in Repert. Sp. Nov. XLI (1937) 201, XLIV (1938) 223, in Cact. Journ. VI (1937) 18.

Plant stemless, 5-7 cm. in diam., proliferous from the base, younger leaves erect, the older more or less spreading.

Leaves ovate-lanceolate, acuminate, 3-3.5 cm. long, 6-10 mm. broad, deep green and somewhat shining, face of leaves smooth or often with a more or less tubercled median line, slightly convex in the upper part and often lightly recurved, back of leaves rounded and keeled in the upper part, often with a secondary keel, the pellucid upper part of leaf face is about 1 cm. long, with 3-5 green lengthwise lines, the middle line ex-

tending to the tip, the pellucid area on back of leaves is not so pronounced and consists of some pellucid lengthwise spots or areas and with the same green lengthwise lines, the margins with a distinct pellucid band, especially in the upper half, margin and keel with whitish teeth which scarcely attain a length of 1 mm.

Type locality: Cape Colony; Gt. Brak River. Also recorded from Heidelberg; George; Avontuur; Worcester; Brandwacht; Zebra.

Named in honor of Mrs. H. Helm of Gt. Brak River.

A small Haworthia in the sect. Setato-Araneae Poelln. The photos illustrating this Haworthia show two different views of the same plant,

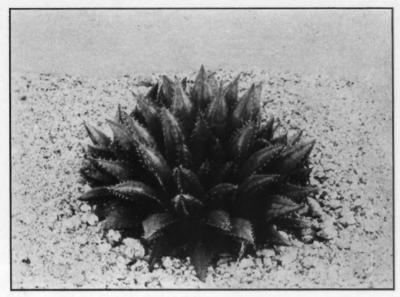


Fig. 29. Haworthia Helmae Poelln. nat. size.

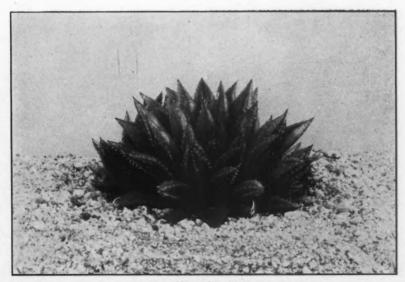


Fig. 30. Haworthia Helmae Poelln. nat. size.

AFFILIATE NOTES

Address your Affiliate Notes to Chas. Place, 5048 Hook Tree Rd., Rt. 1, Box 388 T, La Cañada, Calif.

All the signs of spring are beginning to show. The birds are migrating northward, the leaves on the trees are commencing to unfold, this office is receiving many announcements of new members added to the rosters of the various Affiliates.

Mrs. Elizabeth Fenton (Sec.) writes:

"The Philadelphia Cactus and Succulent Society did not meet during July, August or September. In June we had a picnic at the home of Mr. Nabenhauer. No business was discussed. It was one of the hottest days, but we cooled off with soft drinks under the trees. Mr. Nabenhauer has a greenhouse atop the We braved the heat to view some plants. Most of the cacti and succulents were outside buried in the ground and outlining a path. The first fall meeting was at the home of Mrs. Vivian Hood, in October. The sun room was filled with plants but as there is no heat they have to be moved into the house when it gets cold. The dining room has glass shelves at one window filled with her favorites. The other window has some of the largest specimen plants I have We decided ever seen. Truly a wonderful collection. to hold meetings every two months. Mr. Nabenhauer showed us colored pictures of his cactus flowers which he took in the spring. December meeting was the Christmas party at the Martins. After the business meeting we really had a lot of fun, matching the names of plants to the numbers, then they were distributed in the order of merit. The Martins had plants wrapped in Christmas paper and we took our pick and did we get surprised at the different plants. We have a new member and expect two more to join. This brings us up to date.

Congratulations on the success you have attained, despite the many difficulties.

Miss Muriel Colburn (Pres.) writes:

"The Denver Cactus and Succulent Society held their Christmas party which was a complete success from the standpoint of each member receiving about four fine specimen plants of cacti and succulents. The Denver Club meets the last Friday of each month. Friday night's (Jan. 25th) meeting was especially enjoyable since we all received some plants from Mrs. R. R. Benson of Ft. Collins, Colorado, through the kindness of Mrs. Place. The February meeting was held at the home of the President. The following topics were discussed, Cactus flowers—Mr. Hulegard, Cactus fruit -Mr. Barker, Cactus construction-Mr. Hollingsworth, Cactus spines-Mrs. Villien. We are keeping the Convention in Mind."

We will be glad to welcome Denver at the Convention.

John E. Rodgers (Sec. Treas.) writes:

"The Midwest Cactus and Succulent Society held their December meeting at Shaker Heights. It was the regular meeting month for the election of officers. Due to the cold there was no quorum. Hostess and Rodgers there. In January, election held, Mr. E. J. Fish, Strongsville, Ohio, President. Mrs. F. N. Hinckley, E. Cleveland, 1st Vice-President. Mrs. J. F. Machwart, Parma Heights, Ohio, 2nd Vice-President. Mr. John E. Rodgers, 1229 8th St., Lorain, Ohio, Secretary-Treasurer. Our war time attendance averaged six per meeting even when two of us were in Florida and autos were taboo unless B. or C."

Great credit due to you and your Club, under adverse conditions.

Ethel Rush (Cor.) writes:

The Los Angeles Cactus and Succulent Society met Sunday, February 3rd, at the home of Mr. and Mrs. O. H. Janzow in Glendale, Calif. It being one of those first of the season storms, those who braved the floods and winds had a real round table discussion on "Orchid Cacti" or the so-called hybrid Epiphyllums. One interesting point brought out in discussion was that a hybrid between Heliocereus speciosus and Hylocereus monacanthus, while producing a very pretty series of flowers, certainly had no claim to the right to use the name Epiphyllum.'

I remained at home and had a round table discussion with the flu bug.

Mrs. R. H. Rodgers (Pres.) writes: "The El Paso Rock and Garden Club was organized ten years ago, in my home. We hold our meetings regularly once each month and always have a lesson on cacti or rocks, then on the 4th Tuesday of each month we have a social meeting. We have had many field trips and now that tires and gas are available we hope to be able to go places again. We enjoy collecting rocks as much as cacti and our gardens are very attractive when built of beautiful and colorful rocks and make a lovely setting for our cacti. All of our members will be glad to welcome visitors at any time and especially would you enjoy seeing our 'Rosais' in bloom from April 1st to May 1st."

Would surely enjoy a visit with you. C. L. Wiese (Pub. Chairman) writes:

The Oklahoma Cactus and Succulent Society, at its first meeting in January, 1946, initiated 13 new members. Chas, and Mary Polaski entertained us with colored movie pictures of the Cactus Belt along the Border, showing crested Carnegieas and their "Travelogue of Old Mexico." The Cactus and Succulent sections of our Municipal Conservatory which burned last spring is now again open to public visitors. All plants are protected behind glass encasements, ultra-modern.
Our member, Henry Walter, chief horticulturist for
the City Park Department, has the honor of being named General Chairman of the Horticultural Di-vision of the American Institute of Park Executives. We're proud of that."

Thanks for your Society's year book, it is the best I have seen.

Miss Muriel Merrell (Editor, Pub. Chairman) writes: The Southern California Cactus Exchange held their meeting February 17th, at the usual place in Exposition Park. A nice group of flower arrangements were exhibited and the division's dish garden won by Frank Mark, who in turn offered it at auction, the proceeds reverting to the Treasury. William Bright, Secretary, read the Association's letter to the 'Citrus Experiment Station at Riverside, protesting further importation of the Moth-Larvae as a check on pest cactus. He also wrote to the Department of Agriculture at Sacramento. Tribute is paid to Mr. Bright for this particularly meritorious letter. Scheduled to highlight the program was a talk by M. G. Mason. Unable to speak himself, due to a cold, he prepared the written counterpart and it was delivered by Homer G. Rush."

I do not think that we need an importation of bugs in California.

Mrs. Martha Maxwell (Pub. Chairman) writes:

'The Epiphyllum Society of America held their January 7th meeting in the Pasadena Library, with the officers for the coming year are: President, Mrs. Cactus Pete, presiding. Officers for the coming year are: President, Mrs. Cactus Pete; Vice-President, Mrs. W. R. Hubbard; Secretary-Treasurer, W. W. Weston; Historian, Mrs. M. Harte; Librarian, Mrs. M. Place; Editor, Mrs. Gertrude Beahm; Parlimentarian, Mrs. W. R. Hubbard; Directors, Mrs. T. Monmonier, Mr. J. McNary, Mrs. Beahm, Mr. Haselton, Mr. H. Wagener, Mr. R. Kelly, Mrs. Hubbard, Mr. Cactus Pete. Some very fine Kodachrome slides were shown by Mrs. Beahm, to illustrate the most interesting talk by Mr. H. M. Wegener on the ever increasingly popular plants, the Epiphyllums. There is no one in America with a longer period of time devoted to the culture and propagation of Epiphyllums. Mr. Wegener started his collection some 40 years ago, while touring Europe. Some of our best known varieties are his introduction, Beauty Wegener; being one of his best. His talk is published in the midwinter, Vol. 3, of the Epiphyllum Society Bulletin."

A wonderful talk by a man who knows his subject.

From the Cactus Digest of the Henry Shaw Cactus Club, Lad Cutak, Editor:

"At the January meeting, which was well attended, Mr. L. Arthur Frank, the new program Chairman, delivered a talk on Soil. The response in the monthly show got off to a good start and there were some really nice entries. We hope you will continue in this contest and encourage others to do the same. The attendance prize was a succulent corsage, designed and donated by Mrs. Dolly Fruehauf and won by Harold Wilcox, Jr., a new member, who in turn, presented it to his wife, another new member. This month we have increased your Digest, from the usual nine pages to eleven, because of the additional material on hand."

THE SIZE AND AGE OF A FEW CACTI

By F. B. Noyes

After raising cacti a few years how large will different plants become? How long will they

Is it a short life and a merry one, as in man, which comes from good food and an abundance of liquid, or will life last longer without the fierce struggle they endure on the desert?

These are interesting questions and rarely touched upon by cactus books and catalogues. The latter especially go to great length to describe the personal charms of their wares, but rarely give conservative information on the plants for sale. Such questions are posers to me though I can make few observations from experience with the size and rate of growth after five to fifteen years in normal California weather.

The results for twenty-seven cacti and three desert trees are as follows:

Ancistrocactus Scheeri has become five inches high in five years from seed and has bloomed on and off during all of the last two summers.

Cephalocereus Palmeri, bought as a four inch seedling is now, after five years, six feet tall with three branches. It bloomed for the first time this summer from the cephalium on the tallest head, and from the second limb in September. Birds prefer to line their nests with the soft hair from this cactus instead of the coarser hair of Cephalocereus senilis.

Cephalocereus senilis has grown from eight inches to three feet tall in six years. Of course there are still no branches and it is much too young to bloom.

Cereus peruvianus grows faster than all other cacti in the garden. Starting from a six inch seedling, probably one year old or less, it is now eighteen feet tall with eight branches. Flowers have appeared the last three years of the five required to reach this height and are seen on many summer nights even through September.

Cereus jamacaru began the same as C. peru-

vianus and is now a single stem sixteen feet high. The blooms are nearly the same but they have set fruit in greater proportion for some reason.

These two cacti are close together and their differences are easily noted. Two years ago *C. jamacaru* started a side arm close to the ground. This was removed and no branches have appeared since but the cactus has shot skyward at a rate which will overtake *C. peruvianus* in another year.

Cleistocactus Straussii was planted six years ago with three stems. Now seventeen stems make up the clump and they are from six to thirty inches tall. So far the flowers have appeared sparingly in July.

Coryphantha erecta becomes surprisingly large for that genus. After five years there is a loose cluster of twenty-four heads twelve inches tall and three feet in diameter which was a small three-stemmed plant to begin with. The spine-bug prefers this cactus to most others and must be fought with frequent sprayings and ant exterminations.

Echinocereus de Laetii came five years ago from Mexico with three stems. Now it has seventeen from three to twelve inches long and has bloomed in June the last two years. During summer the stems spread out in all directions, the longest horizontally. In winter all crowd together as if seeking warmth.

Echinocereus Engelmannii grows slowly in this climate. After five years some plants have a new stem or two, others simply are a little longer. It is the tortoise of the genus.

Echinocereus Reichenbachii produces one to three branches a year when young. Less when large, say ten heads or over. I have a cluster of sixteen heads which becomes completely hidden under the pink satin flowers in May. Transplant this cactus when young and leave it alone when grown up or you lose your plant. Echinocereus stramineus grows slowly, a branch each year or less when young, more in middle age. As the life span of this cactus is double that of human beings the large mounds three or four feet in diameter must be well over

the century mark.

I have one mound three feet across and eighteen inches high of one hundred fifty-two heads. It is a fine sight when in bloom as the purple flowers are very large. Specimens of this size are difficult to transplant, of course, and the

percentage of loss is high.

Ferocactus acanthodes, a twenty-one inch plant, grows an inch a year. The small ones increase in diameter faster than height until they are eight to ten inches across, but I have never had one exceed an inch a year in any direction. The age of these Barrels on the desert must be great because their growth some years is nil.

Ferocactus Covillei here blooms in July, August and September. One now a foot in diameter and ten inches high is growing at the rate of one half-inch in height and one inch in diameter per year. Because a full grown cactus reaches four feet high and sixteen inches in diameter this ratio of increase will change. Its dark cherry colored flowers are of an unusual color.

Ferocactus Wislizenii, a collected cactus sixteen inches in the three dimensions is growing twice as fast as Ferocactus Covillei and at the same diameter height ratio. A mature plant is six feet tall. The flowers are orange and the

best looking of this genus.

Mammillaria elongata stella-aurata was bought with fifteen stems four years ago. Now it has thirty-seven. Seedlings of one or two heads grow rapidly till maturity at ten years or so.

Mammillaria durispina needs ten years to reach the height of eight inches and the diameter of four inches. This cactus blooms most

any time in summer or winter.

Mammillaria Klissingiana, a difficult plant, becomes a three-inch sphere in five years. This is a neat white cactus with a ring of pink blossoms in spring, followed by red fruits and always attracts attention. M. Klissingiana and M. Habniana are the two best white cacti of this large genus.

Mammillaria Vaupelii has grown from an inch seedling to a four inch hemisphere in three years. It does better with a little afternoon shade and is a fast grower of the non-

branching type.

Opuntia basilaris, our native Beaver Tail, has become a clump three feet across in five years

from a single pad.

Opuntia erinacea, 6 years old, is two feet high and three feet long. It rots easily with little cause.

Opuntia ficus indica is twelve feet high and has a large trunk. This cactus has reached its maturity and is making little growth. Possibly two wet winters in succession have hastened this process by damaging the root system. To prevent breakdown underpruning was necessary for several years.

Opuntia fulgida was collected in the Mojave Desert when a small plant of uncertain age. In five years it has grown to be thirty inches high. Taking two years to really become established this cholla now acts as if it were speeding up for

the home stretch.

Opuntia imbricata ten feet high after eight years needs plenty of room and several thinnings each season to keep it from breaking down. This dangerous cholla is not meant for

small cactus gardens.

Opuntia leucotricha is also ten feet high but has used only six years for this. It needs thinning twice a year. The yellow edible fruit has a different flavor than most tunas but is covered with villianous small spines which have to be

singed off.

Opuntia linguiformis has grown faster than all other prickly pears. Starting from a two foot pad, planted upright, this cutting grew a four foot pad horizontally from each edge and therefore at the end of the season had a spread of nine feet. The next two years the plant reached a height of six feet and, of course, had to be thinned and tied to stakes.

A legal case has lately come to my attention regarding an Opuntia. As it is somewhat out of the ordinary and has not yet been settled, I am sure readers of the JOURNAL will be interested. A rare Opuntia, owned by Mr. A., was run over by Mr. B.'s car and thoroughly squashed. Damage, both practical and esthetical was asked by Mr. A. At the trial Mr. B. claimed he salvaged two or three pads and from them the plant could be replaced in a year's time as this cactus grew very fast. (This assertion streached the point somewhat.) Of course this was denied by Mr. A. A sidelight of the trial was the fact that Mr. B. had two tires punctured by cactus spines. Mr. A. is suing for full value of the plant and damages as stated above. This raised the question: When is an Opuntia considered dead? Is it like an apple or orange tree, an artichoke or

Trichocereus Shaferi, six year old, has twentyfive stems a foot or less tall. The plant is hidden by immense flowers in May and the stems or heads are larger in diameter than Trichocereus Schickendantzii which it resembles otherwise.

Trichocereus Spachianus grows one or two feet a year when thinned to three or four stems, but allowed to grow naturally develops many stems which increase in height six inches to a

foot per year.

The following are not cacti, but because they are from the desert and fit so well in all but small cactus gardens, these three trees are mentioned here: Desert Willow (Chilopsis linearis), Mesquite (Prosopis juliflora) and Palo Verde (Cercidium Torreyanum). After six years the Desert Willow is twelve feet tall and flowers all summer. In the same length of time the Mesquite has a height and spread of fifteen feet. It blooms in June. One Palo Verde, also in six years is now twenty-five feet high. Another, unpruned, has a height and spread of fifteen feet. They bloom from June to November. Both the Mesquite and Palo Verde are thorny, while the Desert Willow is not.

Cacti doing best in part shade should be planted under the Desert Willow rather than the other trees mentioned, since these latter shed their leaves continuously and in such quantity as to cover small cacti and disfigure large

ones.

The plants mentioned in this article are most likely growing better than average and much faster than in their natural habitats. It is human nature to talk about and more so to write about proteges which do well while keeping silent about others that do not do so well.

Vacaville, California. 4-15-1944.

Postscript. In the winter of 1944-45 there occurred two weeks of "unusual" weather in the form of the Sacramento Valley's famous Tule fogs. This kind of moisture is more damaging to cacti than an excess of rain. The following plants were damaged and if left in place would of course, have died before the winter's end. Several Astrophytums rotted in addition.

The Cephalocereus Palmeri, previously mentioned, was girdled by rot at ground level. To save this plant it was cut off at sound tissue and stored till May in a dry place. Then replanted with the three arms as separate cuttings. All grew and the main stem bloomed as if nothing

had happened.

One large Echinocereus stramineus, about two hundred heads was lost from internal rot. Due to the nature and shape of this plant no part was worth salvaging. An experienced grower can always tell this sight unseen, by the peculiar and disagreeable odor given off by the cactus when decay sets in.

A three-foot Cephalocereus chrysacanthus rotted in the same way as Cephalocereus Palmeri. It was rooted as a cutting next summer but made

little growth.

Rathbunia alamosensis, branched and three feet tall also had to be rerooted as cuttings. It bloomed and made good growth in contrast to C. chrysacanthus.

Now this experience and similar ones in the past with Cerei indicate that here at least, they should be carefully watched in the winter till eight or ten years old. Most of any large ones show scars from infections in their youth. When detected in time a surgical operation, cutting away to sound tissue, dusting with Semesan, and protection from moisture will result in cure. The cut may take two or three years to fill in, but it does, and on a full grown plant can hardly be detected.

The writer would like to hear from southern California growers of their experiences in "Unusual weather."



Fig. 31. An early painting of Phyllocactus Thomasianus.

PHYLLOCACTUS THOMASIANUS K. Sch.

By KARL SCHUMANN in "Kakteenkunde" Volume 5, No. 1, January, 1895 Translated by Edwin P. Gueguen

(Britton and Rose place this as a synonym of Epiphyllum macropterum.)

The body of this plant is hardly distinguishable from those species of the genus which bear relationship to *Phyllocactus phyllanthoides*. The

flower, however, is quite different, and stamps this species as one of the most interesting.

The entire length of the flower reaches 25 to 30 cm.; the ovary being 15 cm. long, cylindric, 10 to 12 mm. in diameter, a fresh green color and bearing a few brown, 1 to 1.5 mm. long, broad three-sided or lineal-oblong scales. The flower tube has a length of 16 to 20 cm., is relatively thin, barely reaching 8 mm. in diameter at the middle; its color is dark green below shading by degrees into dark flesh-color, somewhat angled at the base, becoming round and fluted above; it bears triangular pointed scales spaced far apart, 3 to 8 mm. in length. The petals form a cup-shaped arrangement, their lengths from the outside to the inner are 10, 15, 35, 50, 85, 95, 100, and 90 mm., the outermost are dark flesh-colored around the mid-nerve, fading out at the borders; the middle petals are yellowish white with reddish mid-stripe or borders; the innermost are nearly pure-white with only the slightest trace of vellow; the outermost are lanceolate and well rolled at the borders; the middle petals are more spatulate (above to 15 mm.) broad, the innermost are completly spatulate with a breadth of 25 mm. The stamens cover an area of 12 to 15 cm. above the base of the tube; about 2 cm. higher up a second inner ring occurs, the filaments of these standing in a row. The filaments of the outer stamens are 6 to 6.5 cm., those of the inner 8 to 9 cm. long, the former bend downward, the latter stand perpendicular; their color is chrome-yellow, light below, darker above; the anthers are gray-brown and 3.5 to 4 mm. long. The 23 to 25 cm. long style is white, only 2 mm. thick and bears 14 chamois-yellow, subulate, pointed lobes of 8 to 9 mm. in length, which form a funnelform recess in the center.

This remarkable new species of the genus *Phyllocactus*, as can be seen from the description, should by no means be regarded as one of the innumerable hybrids created by horticulture, but must be considered a good well-founded new and excellent species to be associated with *P. Hookeri*, from which it however differs, as well as from any species known to me, by its much larger, recurved dark red outer petals, bell-shaped flower and the yellow stamens. The odor of the flower resembles a sponge cake as Inspector Maul rightly noticed. Unfortunately the origin of the plant is unknown although I believe only Central America or Northern Brazil should be taken into consideration.

I received the plant through the kindness of my two friends, Postal Inspector Maul and Bookkeeper Thomas of the National Bank, whom I hereby wish to thank; the latter is also to be commended for its reception and propagation. I have retained the name under which it has already been distributed to many of our members as a token of esteem of this active and skillful grower of Phyllocacti.

Kakteenkunde Volume 5, No. 10, October, 1895 By WILLIAM WEINGART

I received Phyllocactus latifrons* Hook. Easter, 1893, as a rooted cutting from Lorenz-Erfurt. The plant is easily distinguishable from other Phyllocacti by its long (50 cm. and over) and broad (to 10 cm.) joints which are a lustrous bright green. Quite characteristic of it is the fact that in summer the growths turn yellow (chrome-yellow) in full sun, in winter they lose this coloring. In the spring of 1894 and again in 1895 the plant, which grew fast and is even now fairly large, produced four buds; these, however, blighted and fell off. For three weeks this season buds developed on two-year growths and these grew fast until on September 4, 8 p.m. came the first sign that they would bloom, and by 10 o'clock they were wide open. The wide inner petals form a diameter of about 8 cm.. the outer ones about 20 cm. When the flowers were fully open they began to smell strongly like orange-blossoms; the pollen scattered about 11 o'clock, and about 5 a.m. the flowers closed. It seems that the buds developed only at high temperatures, I always maintained a temperature of 60° F. in the glasshouse at noon. The buds which persisted were always at the tips of the growths, those at the sides fell off immediately. * Britton and Rose place this as a synonym of Epiphyllum oxypetalum.

EPIPHYLLUM SOCIETY NOTES

There will be a meeting on Thursday, March 21, in the lecture room of the Los Angeles City Library at 7 p.m. Wm. Taylor Marshall will give an illustrated talk on the Epiphyllanae and the flower structure and forms of the Orchid Cacti. The importance of this talk is to prepare collectors for the flowering season so that they will be able to make descriptions and learn how to distinguish one plant from another.

The Garden Tour is scheduled for the third Sunday in May and is under the leadership of Mrs. W. R. Hubbard of 2172 Balmer Drive, Los Angeles. This address will be the starting point of the tour ending with a picnic lunch in the afternoon at the home of collector James B. McNary, 1760 E. Paloma Street, Pasadena. This will be near two well-known nurseries—Coolidge Rare Plant Gardens and the Beahm Gardens. Complete details will be issued in the next number of the Epiphyllum Society Bulletin. Membership in the Society is \$2 per year and should be sent to the Secretary, Capt. W. W. Weston, 2927 S. Howard Blvd., Los Angeles.

Orchid Cactus References in Volume XVII of the Cactus and Succulent Journal, 1945

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Fig. 32. Agave Ferdinandi-Regis, photo by Robert Flores.

Agave Ferdinandi-Regis J. R. BROWN

In a recent issue of this Journ. (Aug., 1945), in a paper about *Agave Ferdinandi-Regis*, the writer stated that he did not know of any definite locality where this Agave is found. Since then, Robert Flores, who has done some interesting

field work and taken many excellent photographs in Mexico, has found Agave Ferdinandi-Regis Berger growing some 20 miles S.E. of Saltillo, near the Monterrey-Saltillo highway, in the state of Coahuila, at an elevation of 4000-5000 feet. Mr. Flores also sent a photograph of this Agave taken at this locality which is presented here.



March 1. March lion roaring! Crassulas just in the midst of blooming period for me. C. multicava covered with clusters of fairy-pink flowers. Used earliest ones with blue "dutch iris" to form a beautiful corsage. White ribbon made it distinctive, if not patriotic, February 22nd for my best girl's birthday. Pretty! Original? Bouquet material which increases next year's possibilities for blooms. Branches profusely when cut back.

March 4. Crassula argentea through blooming. Budded late last November and began to bloom in January. Blooms white with five "reddish" stamens. Plant shrubby, 3 feet tall, pot and all. Stem 8 inches in circumference at base. Had 3 large branches. One through accident got broken off. Made cuttings for 15 happy children eager for some of my plant materials. If left too dry, loses stems and lower leaves. Furnishes free cuttings for more young enthusiasts. One soldier in army wrote me his plant I gave him years ago was going to start his post-war collection. I never envy anyone that's just starting out, do you? Fascination of succulents has never left me—there's always something new to think about.

March 7. C. trachysantha growing but no promise of blooms. Rather leggy in my estimation in an upright way. Decorative. Hairy leaves, thicker and stubbier than C. Justi-Corderoyi. The latter grows new shoots from the base. Becomes an attractive cluster in two to three years from a single cutting. Blooms anytime for me. "Succulents for the Amateur," page 84, states, "C. Cooperi, C. Schmidtii, and C. Justi-Corderoyi. These three Crassulas flower in midsummer." Perhaps mine doesn't know when summer is around here. It was 670 here in January though with 29% more sunshine than average for Great Lakes region.

March 10. Crassula teres is one of the difficult species of this genus to grow. Growing in a sandy humus soil, it kept going backwards for me until I set it on a bed of sand where pot is kept cool and moisture is constant. One inch cutting when I began its rehabilitation. Now center shoot is 3 inches tall. Has 4 offsets. Looks like rattle-snake rattles. C. hemisphaerica attractive but blooms are not worth what it takes out of plant. Has two heads. Have kept it in a small pot with good drainage. Seems to prefer frequent waterings. Loses leaves when too dry. Compact with scale-like overlapping leaves. Attractive. Do not own C. barbata or C. columnaris but I do have C. pyramidalis which absorbs water by means of hairs or minute tubes on its leaves. The leaves of C. pyramidalis are so arranged that any water falling on the leaves penetrates between the leaves, runs to the base and is absorbed by the hairs placed there for that purpose.

March 13. Crassula rotundifolia rather belies its name, until I found its leaves are round only when allowed to grow outside in full sun. In greenhouse becomes oval. Plant grows best when in regular type of soil (2 parts rotted leaf mold, one part finely divided clay, and 2 or 3 parts of coarse sand) in a pot smaller than size of plant would warrant. Seems to resent too much attention.

March 17. Saint Patrick's day in the morning and

was I glad to do my repotting. The better the day, the better the deed, says I. So I started rejuvenation of the plants by placer method before adding the new soil over the exposed roots. (Sharp stream of water partly washes out old soil then refill with soil used for C. rotundifolia). No small job to do Crassula argeniea, cultrata, deltoidea, elata, falcata, hemisphaerica, Justi-Corderoyi, lactea, lycopodioides and pseudolycopodioides, multicava, perforata, perfossa, portulacea, pyramidalis, rupestris, Schmidtii, tecta, teres, tetragona, and trachysantha. (Newer ones have already been potted in this soil.) Firmed soil with hands. Syringed with florist spray bulb and set in former place. This method never disturbs the plant nor makes it necessary to be repotted when adding new soil. Ambition lags later.

March 20. Spring? Weather is wonderful! Lamb indeed! Fresh air aplenty with all doors and ventilators open. 'Checked blooms on C. lycopodioides with "300 power" glass found they were not "dried up." Each of the five tips of the yellow flower has maroon tips. Distinctive! Checked C. elata, a gift from Louis Wahrer now resident of San Diego, California. Stems turn orangy-red in full sun. Blooms in late fall. Continues for several months. Fragrant as heliotrope.

March 25. Crassulas tecta (white), elata (yellowish-white), perforata (off yellow), Schmidti (pinkish-red), hemisphaerica (off yellow), Justi-Corderoyi (pink), rupestris (pinkish), orbicularis (off yellow, multicava (shell pink), in bloom. Do add blooms to an otherwise drab period from December to March. Not one of them is spectacular. Pretty, yes.

March 28. Crassula falcata growing new bloom head beside "mummified" bloom stalk of last summer. Dried flowers are burnt-orange now, were vermilion with yellow stamens. Long graceful truss. Vivid against the gray-neat leafy surface. Leaves turn two rows to right, two to left. Gives plant a flat appearance. Microscope shows cells are set on end (idioblasts). Retards evaporation. Blooms are good cut flowers if you've got enough. I haven't. In fact I don't have room actually for all the plants I have now. I've got "succulentosis" but it's as much pleasure as "Cactisitis" has been for all these years.

March 31. Crassula arborescens (Cotyledon punctata) a beautiful gray green covered with translucent, spotted leaf. Is much different from one I got recently and as yet unnamed by its former owner—has short kite-shaped leaves, white green, with same branching habit as C. argentea. Crassula cultrata ("airplane plant") grows best when kept moist in soil on "clayey" side. Have watered all of my succulents this year once a week—results are good. No "extra" growth. More blooms per plant. No losses).

(Next month Echeverias)

JOURNAL-TEN YEAR INDEX

Your back issues will be more usable if you have this 10-year cumulative index of 20,000 references. Mr. E. M. Baxter devoted a year's spare time in compiling this work. Most of the known plants are listed, as well as the names of people who have made cactus history these last ten years. Bound in cloth, 60 pages \$1.50 postpaid.

THE STAPELIEAE—White and Sloane. The original one volume edition of 1933 with 236 illustrations. For the beginner and general collector this covers most of the plants found in collections. Order now at \$5 before this becomes a collector's item like so many of the Abbey Press Books now out of print.

BOX 101, PASADENA



My heart burdened with sorrow I make this feeble eflort to pay tribute to my dear father, Joseph Cutak, who passed away on February 20th last, in his 63rd year. Although ailing for the past 10 years with what the doctors diagnosed a nervous condition, the end was a rather sudden blow to the family as he died of a heart ailment at Alexian Brothers Hospital without the family at his bedside. I owe everything to my dad. It was from him that I inherited my love for plants. He had been associated with flowers practically all his life, receiving his horticultural training in Europe and then for the past 32 years was associated with the Missouri Botanical Garden in St. Louis, where he was in charge of Exotics, including orchids and waterlilies.

Born in Svatoborice, Moravia, Czechoslovakia (then under Austrian rule) on September 20, 1882, he spent his youth in Europe and in 1912 embarked for America where he planned to make his future home. We do not know much about his early life for he very seldom spoke about it. His parents died while he was very young and apparently his older brother Frank and he had to shift for themselves as best as they could. For some time he was doing gardening work in Kyjov on the estate of two wealthy lumbermen and at different periods was employed in other private gardens. Eventually he came to Vienna and secured a job at Schönbrunn, recognized as the greatest of the imperial castles. This castle had belonged to the emperor ever since the sixteenth century and contained spacious formal gardens and a menagerie rivaling the famous gardens at Versailles in spaciousness and ornate design. In 1903 and 1904 he entered compulsory training in the Austrian Infantry and a few years later came to Bukovany, where he met and married Miss Cecilia Selucky, mother of his six children, of which I happen to be the oldest. Upon arrival in America, he went direct to St. Louis and worked at odd jobs, such as in a rope factory and iron foundry, until an opening pre-sented itself at the Missouri Botanical Garden in 1914. where he served faithfully until his death.

At the Garden he started out in floriculture, growing

chrysanthemums and other such flowers for display purposes. Later he was transferred to the Exotic department in charge of the Main Conservatories, where he devoted many years to cacti and succulents. Fre-quently he would bring home an odd cactus and apparently that is how I got interested in cacti and became an even greater enthusiast in later years. How well I remember those moments when my dad used to take me to the little cubby-hole in back of the Cactus House and there show me how he grafted, propagated and raised the pets which later were to become my passion. Little did I dream then that I would choose a horticultural career but the seed must have been sown in those tender years and nurtured when I came to the Garden in 1927 where I have remained ever since. Dad enjoyed grafting cacti and several of his grafts are still thriving after 23 years, among them a vigorous Monvillea Cavendishii which has been an attraction in the Cactus House for many years. However, as if by coincidence, this large graft collapsed of its weight the week he died and now only two main stems remain. Another of his early grafts still living is Eu-phorbia lactea cristata, one of the finest crests of this type that I have ever seen anywhere. Last year I removed it to the South African Room but had to split it in order to insure safe transfer.

After I was placed in charge of the Main Conservatories my dad was able to devote all his time to orchids and waterlilies. He took great pride in the aquatics and always delighted in telling how he raised from seed and flowered for the first time the "lost yellow tropical waterlily of Africa." If you do not already know, our Garden, like several other institutions, had been searching for the yellow lily hoping by its acquisition to be able to bring forth a new range of color in tropical day bloomers. Our institution was successful in its search and received from Dr. B. D. Burtt a whole seedpod, containing approximately 3000 seeds. Although apparently immature, all were sown by my dad and through his paternal care a single plant was germinated, grown to maturity and finally flowered in the greenhouse tank—the first yellow tropical lily to bloom under cultivation anywhere in the world. Many notable crosses were made utilizing it as one of the parents, the most noteworthy one being christened "St. Louis." For 19 years dad and I were inseparable companions in work and with him gone to his reward it will be kind of lonesome driving to work without him. However, I know he will always be at my side, in spirit at least, when I need him most.

Now that literature from former occupied and unoccupied countries is coming in, we notice that Hakon Hjelmquist had described two new species of Rhipsalis in Botaniska Notiser for the year 1941. This is the publication of the botanical institution of Lund in Sweden. Although the text is in Swedish, there is an English summary. The text has to do with Rhipsalis species cultivated in the Botanic Garden of Lund, which originally were collected by the late Dr. P. Dusen in Paraná, Brazil. The initial new species is Rhipsalis Dusenii, related to R. rhombea and sometimes passed under this name, or perhaps more closely to R. pachyptera and R. chloroptera. It differs from R. rhomba in being much stouter, the joints thick, stiff and coriaceous whereas those of the latter are thin, foliaceous and flexible. The flowers of R. Dusenii are seven-eights of an inch broad when fully expanded and possess a vanilla-like perfume. In some flowers as high as 120 stamens were counted. In the greenhouse it flowered in March, but in Parana it was collected flowering in June. The other new species is R. fastigiata, belonging in the group Cassythae. According to the author it is most closely related to R. grandiflora and R. hadrosoma, but distinguished from the former by the more cupformed ovary and the more acute stigma lobes, while from the latter it differs in having less cylindrical joints. The stamens are also numerous in this species, about 65-70 in number, and the flower is said to possess a faint hyacinth-like perfume.

Our good friend, Jan A. Schuurman, who is the Consul General of the Netherlands in Chicago, voluntarily works in the greenhouses of Northwestern University taking care of their succulents. The greenhouse is to a large extent a workshop, used for experiments made in the course of teaching botany.

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BOOK LIST

Curt Backeberg and F. M. Knuth. Kaktus—A B C. Copenhagen, 1935. 432 pages of technical descriptions and illustrations of cacti. Written in Danish. This rare book has just been received from Denmark. While available at \$8.75, postage U.S.A. 10c, foreign

Dr. E. Werdermann, Brazil and Its Columnar Cacti-English translation of the German book. Bound in red cloth. An interesting tour of Brazil and the cacti found there \$3.00. Postage: U. S. 7c, foreign 20c.

Lyman Benson and Robert Darrow, A Manual of Southwestern Desert Trees and Sbrubs. Descriptions and illustrations (many in color) and distributional maps of the trees and shrubs found native to the Southwest. \$3.00. Postage: U. S. 10c, foreign 25c.

The Flowering Plants of South Africa. A complete set of 23 volumes of hand-colored plates with descriptions of flowering plants indigenous to South Africa. Includes many plates of Aloes, Haworthias, Ceropegias, Mesembs., bulbous and other plants. Beautifully bound set now available for \$400.00.

Mulford and Racine Foster, Brazil, Orchid of the Tropics, collecting Bromeliads in Brazil. \$3.50.

Rutherford Platt, This Green World. Thrilling adventures in the world of growing plants. Beautifully illustrated. \$4.00.

Each month we will endeavor to bring to the attention of our members, any literature dealing with cacti and succulents, appearing in recent publications. Naturally in resale, the price will be substantially higher than the original; only a few issues will be available through this office.

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